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(Re)thinking the basics of design: Can fairytales be teaching tools?

Cilga Resuloglu[a]*

[a]Dr. Çılga Resuloğlu, Department of Interior Architecture and Environmental Design, Atılım University, Ankara 06836, Turkey

Abstract

Discussing the basics of design can be considered as one of the main issues in trying to understand the fundamentals of the first year design studio. Particularly the first semester of basic design studio teaches basic design concepts such as types of relationships, types of organizations, frame of references and Gestalt principles. All of them are used to teach students to understand the essence of the problem and are utilized to create their own solutions and their design language. It is an impetus process in which exercises are based on basic design concepts and creativity. In general, the concept of creativity is used in the production of an artwork; however, assuming that creativity is a skill that can be improved in a design process, it can also be considered that creativity is a contributory teaching tool. From this perspective, this study aims to find out if basic design concepts affect design of the first year students in relation to creativity. For this purpose, as a final work, students were asked to design a given field in the light of a fairytale. Whether the use of basic design concepts gives an impulse to the creativity of the students and this creativity turns into a successful design are matters of analysis. The study was conducted with the first year students of Interior Architecture and Environmental Design from Atılım University, Ankara, Turkey. The experts evaluated the final works of the students within the framework of basic design concepts and creativity. Results of the study showed that creativity of the basic design work depends on the number of used basic design concepts, which can be concluded as creativity of the first year students can be improved by teaching basic design concepts in basic design education.

Keywords: Basic design education, concepts of basic design, creativity.

1. Introduction

Firstly, it is valuable to examine the process of the first semester of basic design studio briefly to understand the logic of this study. Improvement of an abstract way of comprehending and examining design concepts as well as built and natural environment was one of the main scopes of the first year design studio. For this purpose, the structure of basic design studio is composed of two dimensional (2D) and three dimensional (3D) exercises. 2D exercises were mainly composed of visual field organization[1] principles, techniques and concepts via geometric shapes from the simple to the intricate. These exercises were mainly revolves around abstraction, pattern, texture and color studies.

3D studies are one of the other main components of basic design education, which were based on spatial configurations in relation to the concepts of basic design such as types of relationships (abstract and concrete relationship, solid-void relationship and geometric relationship), types of organizations (harmony, contrast, balance,

*Dr. Çılga Resuloğlu. Tel.:+90-312-586-8508
E-mail address: cresuloglu@atilim.edu.tr

[1] Throughout the study "organization" is used as a unified arrangement of parts; the activity or result of distributing or arranging objects or things orderly or methodically.

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order, unity, repetition and dominance), frame of references (control of the design field and proportion) and Gesta principles (closure, similarity, proximity, continuity and whole-part relationship). An understanding of spa typologies and relations by using linear, planar and solid elements were developed. Shifting the skills and desig principles gained from 2D to 3D was significant, because in three-dimensional world solid-void relation directs th composition rather than figure-ground relation.[2] In addition to 3D geometric solid-void organizations, color an texture use in 2D and 3D space was analyzed during the first year design education. Exercises were generated evolve workmanship skills of the students such as drafting, model making and drawing, because development

of presentation and communication skills of students' is essential during design education. In the beginning of th first year, students have started to make 2D organizations using the concepts of basic design. Then, students hav initiated 3D exercises by means of experience they have gained during 2D exercises.

Students were expected to solve 2D and 3D design problems during basic design studio. One of the ma concerns of design education is the development of creativity (Casakin and Kreitler, 2008, p. 491) while teachin concepts of basic design. It was assumed that the idea of fairytale as a final work can promote creativity of th students and can give the opportunity to use the basics of design. Producing designs, which were creative an appropriate, were expected of students. In the end of the first semester of basic design studio, assessment in the for of jury, which was composed by instructors, was carried out for the final work to understand when a basic desig work was conceived as successful.

2. A literature review on creativity, basic design concepts and basic design education

The literature on creativity is affluent. Studies have been mostly conducted on how to improve creativ thought process (Cross 1984; Runco 2004). Creativity has historical, cultural, and social bounds, whereas in th study the concept of creativity is examined as an ability, which can be developed during basic design education. It plausible to claim that creative thought should not rely on only talent or chance; it is something beyond. Developin creative thought is one of the main aims of the first year design studio, which introduces and teaches high scho students the concept of abstraction. In that sense, design education must teach students to motivate their ow creativity (Iashin-Shaw, 1994). Horng et al. (2005) in his work clarifies that the creativity must be a foremost issu in new teaching approach. Gaining a better insight in regard to the creativity is the concern of basic desig education.

Jeffries (2007) as well asserts that the creative thought must be increased by teaching methods in the desig education. Studies on creativity highlight that well-defined (design) problems can promote the creative desig process and, thus, "creativity, as a concept of bringing forward new ideas, is seen by many as the driving force in th design process". (Kowaltowski et al., 2010, p. 474). The very purpose of basic design education is to guide towar the integration of finding the appropriate answers to the design problems by producing original ideas, and using th concepts of basic design. Hence, these concepts are considered as guidelines of motivation for design creativity. this process, generating new ideas is considered "as becoming sensitive to a question" (Kowaltowski et al., 2010, 457) which can be also assumed as solving basic design problems smartly.

Basic design education has been mainly discussed in relation to not only creativity but also Gestalt theor because principles in Gestalt theory have devised ways of problem solving and creativity. For instance, R Arnheim's study titled as *Art and Visual Perception: A Psychology of the Creative Eye* (1954) and G. Kepes' stud titled as Language *of Vision* (1944) are the essential sources in trying to comprehend the basic design concep within the concept of creative thought which have enduring influence on design education. Gestalt theory plays significant role on student's learning in basic design studio. It creates a ground to generate a visual representatio because it is based on whole and part relationship, which is the major concern of the first year design educatio Basic design studio teaching based on the discussion of visual representation of the surrounding which is compose of not only types of relationships, types of organizations, frame of references, Gestalt principles but also creativit J. Itten's work *Design and Form; The Basic Course at the Bauhaus* (1964) and K. Bates' study *Basic Desig Principles and Practice* (1949) are also essential references in basic design education. Itten argues that creativ ability should be improved by teaching methods and he claims that the aim of basic design teaching should be " build the whole man as a creative being" (1964, p. 10). Bates concentrates on "do-it-yourself movement" (1949,

[2] Figure-ground relation is the location of all objects with reference to a background in 2D organizations. For definition of solid-void relation, s *3.3. Tools of assessment* section.

9) and he also mentions that student should be informed about concepts of basics of design as well. Both Itten's ar Bates' thoughts are valuable to shed a light on basic design education and the main assertion in this study.

3. Research

3.1. Participants

The setting for this study was the first year basic design studio for 40 students in the Department of Interi Architecture and Environmental Design from Atılım University, Ankara, Turkey.

3.2. Design brief

The final project of the first semester of the basic design studio had two stages, which is composed of 2 and 3D organizations. The project was titled as "Fairytales" and the content of fairytale was significant for motivation as a driving force for creativity. It was designed to elicit the combination of what students have bee taught and their creativity.

Students were asked to produce spaces for freely selected three animals according to the basic desig concepts. These three animals should have qualities like in fairytales, i.e *La Fontaine* and live together in a environment. This environment was not supposed to look like a zoo or a crib. In 2D composition, students we expected to show the features of the selected animals and their relation to the environment in an abstract manne The aim was not to represent one to one 3D organization, but rather to describe what could not have been shown 3D organization and to support 3D organization. In the first phase of the 3D organization, students were asked organize a space with minimum 40cm. x 40cm. base area into different defined spaces and sub-spaces by utilizir some planar and linear elements within the frame of basic design concepts.[3] In the second phase, they were asked create spaces with different qualities thinking the characteristics of the three selected animals. While generating sul spaces, students were inquired to produce spaces with various features and provide a spatial flow between space These transitional spaces must have been integrated with minor and major spaces. Solid-void relation must hav been one of the main concerns of their spatial organizations. One of the other concerns of the students was the sca of the animals due to the proportion of the spaces. As an additional element color utilization was allowed f emphasizing spaces and their hierarchical relations. Fairytale was used as a tool to construct the story of the thr selected animals within the frame of spatial hierarchy. While deciding the characteristics of animals via their space using what they have taught during the semester and systemization of insights was very essential in this problen solving process. Thus, the space productions, the relations of the elements and the way they were grouped ar students' creative thought were under consideration in the final project.

3.3. Tools of assessment

Four instructors, two of them are interior architects and environmental designers and two of them we architects, assessed each student's final work of the first semester titled as fairytales. Evaluation was conducte independently in the form of jury in order to avoid the possibility of affecting each other while evaluating the fin product of the students. Before the jury, oral interview was made by four instructors, which took approximate fifteen minutes. Aiming to understand how instructors defined a successful basic design work. Instructors we individually asked what a successful work should have been consisted of. Three of them mentioned that a successf basic design work should have involved "the concepts learned in the semester and should be unique". One of the claimed that it should have been creative. Then, three of them were asked how they described "unique"; the answ was "creative". There were seventeen basic design concepts, which were taught in the first semester grouped und four main headings, was given to the instructors used in assessment of the final work of the students'. The seventeen basic design concepts were given under the following headings.

Types of relationships: Abstract-concrete relationship (an understanding of the association between tl idealization and realization), solid-void relationship (the contrast of masses) and geometric relationship (harmoniou togetherness of the geometric elements without losing their identities and initial references).

[3]In this study, 3D projects were evaluated by four instructors which was analyzed in *Results and Discussion* section.

Frame of references: Control of the design field and proportion (it refers to the proper and harmonio relation of dimensions such as size, height, length etc. of one part to another or to whole; relation of sizes)

Types of organizations: Harmony (comprehensible resemblance among the parts of a whole), contrast (t opposition of things which are compared; identifiable difference), balance (equality between divergent elements o group and among the groups of an organization), order (a state of rational arrangement among the separate elemen of a group and among the groups of an organization), unity (the quality of being one; decipherable wholenes (Koberg and Bagnal, 1974, pp. 122-123) repetition (being same one after the other) and dominance (exaggeration one element or group to be forth than others)

Gestalt principles: Closure (being recognizable as being complete and partial), similarity (being alike abo the parts of a whole), proximity (close togetherness) continuity (belonging together in a certain direction ev interrupted) (Koberg and Bagnal, 1974, p. 123) and whole-part relationship.

In addition, instructors were requested to evalutae each project in terms of creativity within a scale of lo (1), medium (2) and high (3).

4. Results and Discussion

This study investigated the relation between basic design concepts and creativity as the essenti components of successful basic design project within basic design studio environment. Results depicted t correlation between the used basic design concepts and creativity. The evaluation of four instructors about t relationship between the number of basic design concepts and the creativity rank of the projects of 40 students we given in Table 1 and Graph 1. The average of the findings of the four instructors was depicted in the last colum While 12 out of 40 projects were ranked as high, 17 out of 40 projects medium and the remaining 11 were low terms of creativity rank. According to Table 1, it is noticed that when seven basic concepts were used in the wor of the students, creativity rank was determined as high (3). In order to identify the reason behind the change creativity rank from medium (2) to high (3), when 7 basic design concepts used instead of 6, the evaluation tables instructors were scrutinized. It is identified that when the works which were consisted of 7 basic design concep were concentrated on all the four main groups defined under basic design concepts headings, however the projec having 6 basic design concepts missed at least one of the basic design concept categories, especially types relationships and frame of references. Besides, it is also understood that the works with a high creativity rank (out of 12 projects), they were concentrated on three types of relationships, two frame of references, at least o types of organizations and at least one Gestalt principles were used by a student. If the 3-6 basic design concep used in a work of the student, the rank of creativity was described as medium creativity (2) and if maximum 2 bas design concepts were used, the rank of creativity was rated as low creativity (1).

Table 1. Relationship between basic design concepts and creativity

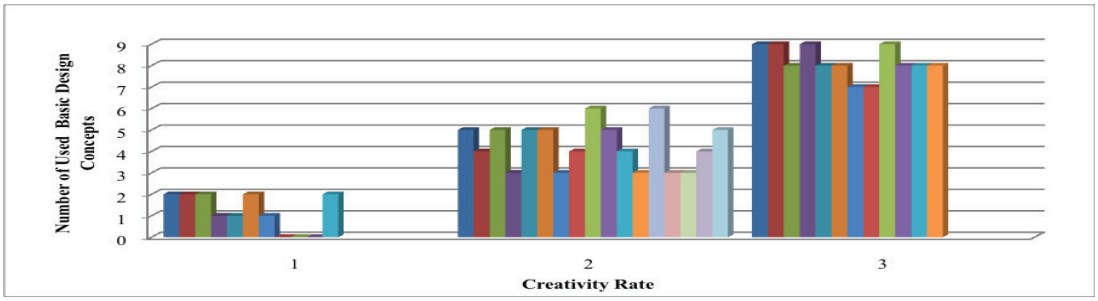
Stu. #	Inst.1		Inst.2		Inst.3		Inst.4		Aver.		Stu. #	Inst.1		Inst.2		Inst.3		Inst.4		Aver.	
	A*	B**	A	B	A	B	A	B	A	B		A	B	A	B	A	B	A	B	A	B
1	9	3	10	3	10	3	8	3	9	3	21	6	2	6	2	6	2	6	2	6	2
2	9	3	10	3	9	3	9	3	9	3	22	5	2	5	2	5	2	5	2	5	2
3	7	3	7	3	8	3	8	3	8	3	23	4	2	4	2	4	2	4	2	4	2
4	8	3	9	3	9	3	9	3	9	3	24	3	2	3	2	3	2	3	2	3	2
5	9	3	8	3	8	3	8	3	8	3	25	6	2	5	2	6	2	6	2	6	2
6	7	3	7	3	8	3	8	3	8	3	26	3	2	3	2	3	2	3	2	3	2
7	7	3	8	3	7	3	7	3	7	3	27	3	2	3	2	3	2	3	2	3	2
8	7	3	7	3	7	3	8	3	7	3	28	4	2	3	2	4	2	4	2	4	2
9	9	3	9	3	8	3	8	3	9	3	29	5	2	5	2	5	2	5	2	5	2
10	8	3	8	3	7	3	8	3	8	3	30	2	1	2	1	2	1	2	1	2	1
11	8	3	8	3	8	3	9	3	8	3	31	2	1	2	1	2	1	2	1	2	1
12	8	3	8	3	8	3	9	3	8	3	32	2	1	2	1	2	1	2	1	2	1
13	5	2	5	2	6	2	5	2	5	2	33	1	1	1	1	0	1	1	1	1	1
14	4	2	4	2	4	2	4	2	4	2	34	1	1	1	1	1	1	1	1	1	1
15	6	2	5	2	5	2	5	2	5	2	35	2	1	2	1	2	1	2	1	2	1

16	3	2	3	2	3	2	3	2	3	2	36	0	1	1	1	1	1	1	1	1
17	5	2	4	2	4	2	5	2	5	2	37	0	1	0	1	0	1	0	1	0	1
18	5	2	5	2	5	2	5	2	5	2	38	0	1	0	1	1	1	0	1	0	1
19	4	2	3	2	3	2	3	2	3	2	39	0	1	0	1	0	1	0	1	0	1
20	4	2	4	2	4	2	4	2	4	2	40	2	1	1	1	2	1	2	1	2	1

* Number of Used Basic Design Concepts

** Creativity Rank

Graph 1. Illustration of relationship between basic design concepts and creativity



As a result of this study, it is plausible to claim that a successful basic design project is understood as th condition of organizational method, which is composed of basic design concepts, in relation to creativity. Thus, t learning the method of basic design, creative activity with all its complexity can be improved. Koberg and Bagn (1974, p. 13) also mention that "creativity is a learnable state of behaviour patterns. It is not magic. [...] Creativi demands listening to your own logical and sensitive conclusions". In a basic design education level, the conclusions are formed by basic design concepts. Utilizing the taught concepts guided the students both to discov the essence of the project they are dealing with and to stimulate creativity. The correlation exists between the bas design concepts and creativity is decisive.

Successful basic design works also show that the student "who has attained a certain level of competence visual thinking is in a way ready to begin architectural design. This is the essence of basic design" (Denel, 197 p.8). For further studies, this approach can give a chance to discuss the effects of basic design education to th architectural education of following years, which can contribute to strengthen the association between the bas design studio and the following studios.

References

Arnheim, R. (1954). *Art and Visual Perception: a Psychology of the Creative Eye*. Berkeley: University of California Press.

Bates, K. F. (1960). *Basic Design, Principles and Practice.* Cleveland and New York: The World Publishing Company.

Casakin H. & Kreitler S. (2008) Correspondences and divergences between teachers and students in the evaluation of design creativity in the design studio. *Environment and Planning B: Planning and Design* 35 (4), 666-678.

Cross, N. (Ed.) (1984). *Developments in Design Methodology*. Chichester: John Wiley & Sons.

Cross, N. (1997). Descriptive Models of Creative Design: Application to an Example. *Design Studies*, 18 (4), 427-455.

Denel, B. (1973). *A Method for Basic Design*. Ankara: Middle East Technical University.

Horng, J. S., Hong, J. C., Chanlin, L. J., Chang, S. H., & Chu, H. C. (2005). Creative Teachers and Creative Teaching Strategies. *International Journal of Consumer Studies*, 29, 352-358.

Iashin-Shaw, I. (1994). Cognitive Structures of Creativity: Implications for Instructional Design. *European Journal for High Ability*, 5, 24-38.

Itten, J. (1964). Maass, J. (Trans.). *Design and Form, The Basic Course at the Bauhaus.* New York: Van Nostrand Reinhold Company.

Jeffries, K. K. (2007). Diagnosing the Creativity of Designers: Individual Feedback within Mass Higher Education. *Design Studies*, 10 (5), pp. 485-497.

Kepes, G. (1944). *Language of Vision*. Chicago: P. Theobald.

Koberg, D. & Bagnall, J. (1974). *The Universal Traveller*. California: William Kaufmann, Inc.

Kowaltowski D. C. C. K., Bianchi G. & Paiva V. T. (2010). Methods that may stimulate creativity and their use in architectural design educatio *International Journal of Technology and Design Education.* 20, 453-476.

Runco, M. A. (2004). Creativity. *Annual Review of Psychology*, 55, 657–687.